

A SCUTTLE FLY (DIPTERA: PHORIDAE) NEW TO BRITAIN CAUGHT IN A NET SUSPENDED 200 METRES ABOVE THE GROUND

R. H. L. DISNEY

University Department of Zoology, Downing Street, Cambridge CB2 3EJ

J. W. CHAPMAN

Entomology & Nematology Department, IACR Rothamsted, Harpenden, Herts AL5 2JQ

Abstract. *Triphleba renidens* Schmitz is added to the British List. The female attributed to *T. inaequalis* Schmitz by Schmitz is now recognised as being *T. vitrea* (Wood). The missing female of *T. inaequalis* is then recognised as being *T. chandleri* Disney, which is therefore synonymised with *T. inaequalis*.

INTRODUCTION

The aerial fauna at approximately 200 m above RAF Cardington, Bedfordshire, was sampled continuously for a 10 day period during July 1999. Airborne arthropods were sampled with a fine mesh net, with an aperture of 0.64 m², that tapered to a detachable bag. The net was suspended underneath a tethered, aerodynamically-shaped balloon filled with helium, and could be closed at the end of sampling periods by a radio-controlled device. The altitude of the balloon during sampling periods was estimated from the length of the anchoring cable and the angle of its elevation (measured by an inclinometer). Estimated sampling heights on the dates referred to below were 235 m on 9.vii.1999, 178 m on 11.vii.1999 and 200 m on 15.vii.1999. Insect samples were killed immediately, stored in ethanol, and identified to family (by JWC). Samples were composed predominantly of aphids, small Diptera and parasitic Hymenoptera.

Of a total of 289 Diptera sampled at altitude, four were Phoridae. Previous aerial trapping studies have also found Phoridae to be frequently caught at altitude (e.g. Hardy & Milne, 1938; Glick, 1939). Indeed this and other evidence (reviewed by Disney, 1994) indicates that long-range wind-borne dispersal may be widespread in this family. The four Phoridae obtained in the suspended net were identified (by RHL D, who has deposited the specimens in the Cambridge University Museum of Zoology) as a gravid female of *Megaselia pleuralis* (Wood), with 20 nearly mature eggs (measuring 0.4 mm in length), on 9.vii.1999; a male *M. longicostalis* (Wood) on 11.vii.1999; a female *Megaselia* sp., possibly the hitherto unknown female of *M. drakei* Disney, but the females of this group remain poorly known; and a male *Triphleba renidens* Schmitz on 15.vii.1999. The latter is the first British record of this otherwise rare European species. Its identification is detailed below. The female of the related *T. inaequalis* Schmitz is reconsidered and it is concluded that the female specimen attributed to this species by Schmitz (1943) is really a female of *T. vitrea* (Wood). This conclusion then allows recognition of *T. chandleri* Disney as the missing female of *T. inaequalis*, so that *T. chandleri* is thereby synonymised with *T. inaequalis*.

TRIPHLEBA RENIDENS SCHMITZ

In the key to British species (Disney, 1983) the males are identified as *T. vitrea* (Wood) (couplet 19 lead 2). However, the left process of the epandrium is distinctly

longer in *T. renidens* and extends well beyond the tips of the longest hairs on the cerci (cf Figs 2 and 3). *T. inaequalis* Schmitz (Fig. 1), not yet reported from Britain, is somewhat intermediate between *T. renidens* and *T. vitrea*. In the keys to the Palaearctic species (Schmitz, 1943) *T. renidens* and *T. inaequalis* are further distinguished by the frons being shiny in the former and dull in the latter species. In slide mounted specimens this translates into the microsetae being minute and sparse (and being mainly found outside the area bounded by the antial and pre-ocellar bristles) in *T. renidens*, and into being larger and dense in *T. inaequalis*. The frons of *T. vitrea* resembles the latter species. Indeed, these two species are very similar, but in *T. inaequalis* the left epandrial process is a little longer than that of *T. vitrea* and the longest hairs of cerci do not reach the level of the tip of the process (cf Figs 1 and 3).

The females of these three species are very similar to each other but are poorly characterised by Schmitz (1943). That of *T. renidens* will be identified as *T. vitrea* (couplet 19) in the key to British species (Disney, 1983). The abdominal sternite 7 of *T. vitrea* as Fig. 4. This so closely resembles the figure of the S7 of *T. inaequalis* given by Schmitz (Fig. 113f) that it raised doubts about their distinction, discussed below. Schmitz did not illustrate the S7 of *T. renidens*, but he described it as being strikingly large, shovel shaped and with a hind margin that is a broad, rounded, gentle arc. The female now attributed to *T. inaequalis* (see below) has the S7 narrowed behind to a dark projecting process.

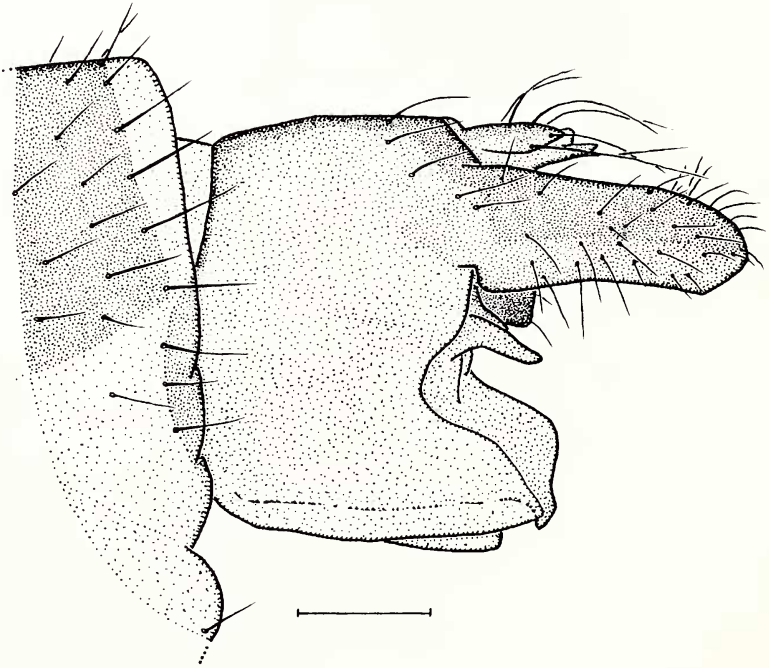


Fig. 1. *Tiphleba inaequalis* male, left face of hypopygium. Scale bar = 0.1 mm.

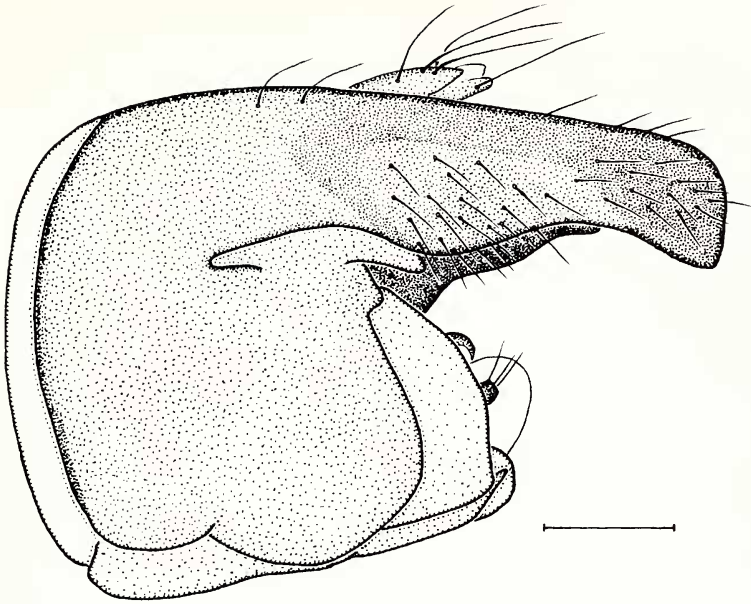


Fig. 2. *Triphleba renidens* male, left face of hypopygium. Scale bar = 0.1 mm.

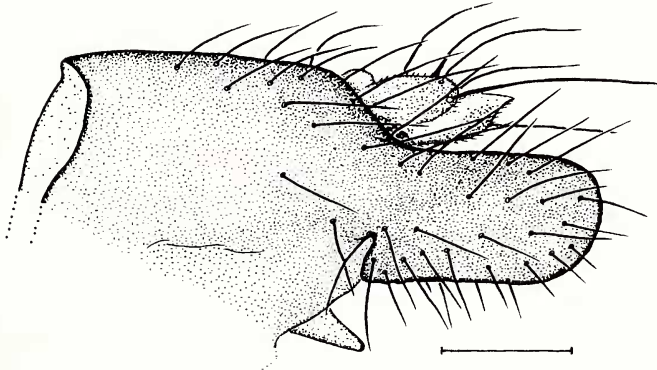


Fig. 3. *Triphleba vitrea* left face of hypopygium. Scale bar = 0.1 mm.

TRIPHLEBA INAEQUALIS SCHMITZ

Triphleba chandleri Disney, 1987: 191. **Syn. nov.**

Schmitz (1943) did not distinguish between the females of *T. vitrea* and *T. inaequalis*, so that lead 1 of his couplet 30 ends with "(? *vitrea* Wood und) *inaequalis* n. sp." He then based his perfunctory description of the female of *T. vitrea* on that of Wood, as he had evidently seen no specimen. By contrast the S7 of the

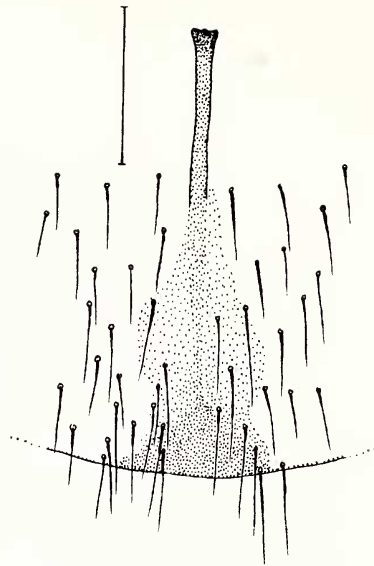


Fig. 4. *Triplebra vitrea* female abdominal sternite 7. Scale bar = 0.1 mm.

female illustrated in our Fig. 4, and identified as *T. vitrea*, is from a specimen in a series of males and females collected on the Malham Tarn NNR in Yorkshire. By contrast, Schmitz's single female attributed to *T. inaequalis* was from Holland, whereas his series of males of this species came from Germany. Furthermore, he reported a series of males of *T. vitrea* from his Dutch locality. Subsequently, a female from Spain which also keys out at Schmitz's couplet 30, was described as new, *T. chandleri* Disney (1987), as its S7 has a narrow posterior projection (Fig. 1 in Disney, 1987). However, this female was collected at the same place and time as two males of *T. inaequalis*. A more plausible explanation of these facts is that Schmitz misidentified a Dutch female of *T. vitrea* as *T. inaequalis*. This in turn caused the true female of the latter to be misidentified as a previously undescribed species, *T. chandleri*. The latter is proposed as a synonym of *T. inaequalis*. Schmitz's Fig. 113f and our Fig. 4 are now considered to be both illustrations of *T. inaequalis*, and the trivial differences are only what might be expected of different specimens drawn by different artists.

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SHORT COMMUNICATION

The possible introduction to Madeira of the monarch butterfly, *Danaus plexippus* (L.) (Lepidoptera).—I was interested to read the paper by Salmon & Wakeham-Dawson (1999) on Wollaston and the Madeiran butterfly fauna. This prompted me to ask the authors if they were aware of a suggestion that the Monarch, *Danaus plexippus* (L.) might owe its presence on Madeira to a deliberate introduction some 20–30 years ago. They were unaware of this possibility. The facts surrounding the claim are as follows.

Bill and Margaret Beer were a couple of wildlife enthusiasts who, until the 1980s lived at Marlow Bottom, Bucks. They were members of the (now defunct) Middle-Thames Natural History Society and of the Amateur Entomologists' Society. They bred, amongst other things, Monarch butterflies and as they did not like killing any insects, sightings in the area from around 1960–80 may well have been releases.

On one occasion when I visited them I was interested to see Milkweed (*Asclepias* sp.) growing out of cracks in the paving of the patio and flourishing. It was there, Bill explained, as foodplant for the Monarchs and he went on to say during the conversation that he had introduced them to Madeira. I wondered at the time whether this was a good thing but made no comment; I do not think he would have understood my doubts. Later I passed on this information to Denis Owen, an old school friend, who at that time was particularly interested in the butterflies of the Canaries and Madeira.

To ensure that my memory had not failed me I felt it was necessary to confirm these facts with others and have now done so with more or less positive results. Those consulted were all members of the MTNHS and bear out the facts so far. One of these, Victor Scott, a local naturalist, added that Bill certainly claimed to have introduced the butterflies to Andalusia “about 30 years ago”.

A letter from Ron Youngman can be quoted (in part)—“They were a quite remarkable couple and always had something on the go. . . . I certainly remember them talking about their attempts to introduce Monarchs in various places and I remember them saying they had sown Milkweed seeds in southern Spain and on at least one island. I don't recall that it was Madeira. . . . I can certainly say they attempted their introductions before 1981 and almost certainly in the late 1960's or early 1970's”. This too is my recollection of the date and seems likely, since Martin Albertini has established from old AES membership lists that Bill Beer died between 1983 and 1987.

As there would be no point in attempting an introduction to the Canaries, since the butterfly first appeared there in 1880 (Higgins & Riley, 1970), it is suggested that